

IN THE CLAIMS

Please cancel claims 1-5 and add new claims 6-17.

(1834)
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6. A common rail system for supplying fuel to internal combustion engines, in particular

Diesel engines of passenger cars, the system comprising

a central high-pressure fuel reservoir (4),

high-pressure fuel lines (5, 7) providing communication between the reservoir and a plurality of injectors, and

a control device (13;17,19) operably connected to the respective injectors for controlling the opening and closing motions of the injectors,

said high-pressure fuel reservoir (4) and the control devices (13; 17, 19) being combined in a module(3), which communicates permanently with the injectors via high-pressure fuel lines (8, 48).

7. The common rail system of claim 6 further comprising at least one sensor (24) integrated with the module (3).

8. The common rail system of claim 6 wherein the control device comprises a first control valve member (13), which is received axially displaceably in the module (3) between an opened position, in which a communication between the high-pressure fuel reservoir (4) and the triggered injector is opened, and a closed position, in which the communication between the high- pressure fuel reservoir (4) and the respective injector is closed, as a function of the pressure in a control chamber (12), and a second axially displaceable control valve member (17, 19), received in the module (3), which opens a communication between the control chamber (12) and a pressureless return (18) as a function of the position of an axially displaceable actuator (22), in particular a piezoelectric actuator, and that the longitudinal axes of the first control valve member (13), the second control valve member (17, 19) and the actuator (22) are each disposed at a right angle to one another.

9. The common rail system of claim 7 wherein the control device comprises a first control valve member (13), which is received axially displaceably in the module (3) between an opened position, in which a communication between the high-pressure fuel reservoir (4) and the triggered injector is opened, and a closed position, in which the communication between the high- pressure fuel reservoir (4) and the respective injector is closed, as a function of the pressure in a control chamber (12), and a second axially displaceable control valve member (17, 19), received in the module (3), which opens a communication between the control chamber (12) and a pressureless return (18) as a function of the position of an axially displaceable actuator (22), in particular a piezoelectric actuator, and that the longitudinal axes of the first control valve member (13), the second control valve member (17, 19) and the actuator (22) are each disposed at a right angle to one another.

10. The common rail system of claim 6 wherein conventional nozzle holder combinations are used as injectors.

11. The common rail system of claim 7 wherein conventional nozzle holder combinations are used as injectors.

12. The common rail system of claim 8 wherein conventional nozzle holder combinations are used as injectors.

13. The common rail system of claim 9 wherein conventional nozzle holder combinations are used as injectors.

14. An internal combustion engine, comprising

a cylinder head (1),

a cylinder head cap (2), and

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a common rail supply system mounted between the cylinder head (1) and the cylinder head cap (2), the common rail fuel supply system including a central high-pressure fuel reservoir (4), high-pressure fuel lines (5, 7) providing communication between the reservoir and a plurality of injectors, and a control device (13;17,19) operably connected to the respective injectors for controlling the opening and closing motions of the injectors, said high-pressure fuel reservoir (4) and the control devices (13; 17, 19) being combined in a module(3), which communicates permanently with the injectors via high-pressure fuel lines (8, 48).

15. The internal combustion engine of claim 14 further comprising at least one sensor (24) integrated with the module.

16. The internal combustion engine of claim 14 wherein the control device comprises a first control valve member (13), which is received axially displaceably in the module (3) between an opened position, in which a communication between the high-pressure fuel reservoir (4) and the triggered injector is opened, and a closed position, in which the communication between the high- pressure fuel reservoir (4) and the respective injector is closed, as a function of the pressure in a control chamber (12), and a second axially displaceable control valve member (17, 19), received in the module (3), which opens a communication between the control chamber (12) and a pressureless return (18) as a function of the position of an axially displaceable actuator (22), in particular a piezoelectric actuator, and that the longitudinal axes of the first control valve member (13), the second control valve member (17, 19) and the actuator (22) are each disposed at a right angle to one another.

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17. The internal combustion engine of claim 14 wherein conventional nozzle holder combinations are used as injectors.
